

REMARKS

In response to the Advisory Action mailed March 30, 2006, Applicants respectfully submit that the Examiner is attempting to combine references in a way that directly contradicts the teachings of at least one of the references. The Advisory Action states that Ishida teaches recording preformat information signals using a servo track writer with a magnetic head. This is true. Ishida also teaches, in a completely different type of device, recording preformat information, including both servo and other preformat information, using a magnetic information carrier. However, Ishida not only fails to teach or suggest using both a magnetic head and a magnetic information carrier to record preformat information on the same magnetic recording medium, but it specifically teaches against this idea. See, e.g., col. 7, lines 36-40:

The conventional method of recording a preformat information signal with a special servo-track writing device and a magnetic head that is built into the drive cannot be employed in the magnetic recording/reproduction device of the present invention.

Further, Tsuyoshi fails to teach or suggest using magnetic transfer for forming servo information. Instead, Tsuyoshi, directed to an optical disk, teaches forming undulations in a base plate.

Additionally, the Advisory Action cites col. 3, lines 55-60 of Tsuyoshi for providing a motivation to “implement the teachings of Tsuyoshi with the teachings as disclosed by Ishida”. However, the cited portion of Tsuyoshi does not mention the benefits of using both magnetic transfer and magnetic head recording at all. Instead, the cited portion teaches the benefits of using a single set of ID information and synchronization signals for an

entire block, to drop the ratio of the ID and synchronization signal to the user data (see, e.g., col. 3, line 61 – col. 4, line 2). This is how, according to the cited portion, Tsuyoshi avoids “reducing the data recording area.”

The Examiner also has not explained how such an “implementation” would take place; that is, how Ishida would be modified. Further, as stated above, Ishida directly teaches against any modification that would combine magnetic transfer and magnetic head recording to provide preformat information. Applicants thus respectfully request reconsideration and withdrawal of the rejection for at least these additional reasons, as well as for the reasons set forth below, which were originally presented in un-entered Amendment C.

Regarding the Office Action mailed December 5, 2005, claims 5-8 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Particularly, the Office Action states that the claim feature “another clock pattern recorded as fine patterns after said servo information pattern is recorded” is not found in the specification as originally filed.

Claim 5 has been amended to clarify that preformat information patterns excluding servo information pattern are recorded as fine patterns after a servo information pattern is recorded. Applicants submit that this amendment is clearly supported by the Specification as filed (e.g., see page 13, lines 14-22; page 16, lines 22-25). Applicants thus respectfully request reconsideration and withdrawal of the rejection.

Claims 1-4, 9, 10, and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida in view of Tsuyoshi. Applicants respectfully traverse the rejection for at least the reason that Ishida fails to teach or suggest the combination of recording at least servo information of preformat information by magnetic transfer, and recording preformat information excluding servo information on a magnetic recording medium by a recording head as defined in independent claims 1, 2, 3, and 9.

Ishida teaches a magnetic recording/reproduction device using preformat information, in which all of the preformat information is recorded using a master information carrier. None of the inventive embodiments in Ishida use a recording head to record preformat information.

The Office Action states that Ishida discloses using a magnetic head for recording preformat information. However, all of the cited portions of Ishida refer to use of a magnetic head for preformat information only in comparison to the master information carrier used in Ishida, not in combination with the master information carrier. For example, col. 1, lines 42-60, and col. 3, lines 40-45 teach prior art devices (referred to as “present hard disk drives” and “conventional methods”) for forming preformat signals using “a built-in magnetic head that records the tracking servo signal”. Col. 9, lines 25-30 teach a conventional magnetization pattern “for comparison” with the master information carrier.

More particularly, the teaching at col. 1, lines 42-60, col. 3, lines 40-45, and col. 9, lines 25-30 of Ishida (prior art), on which the Examiner relies, states that “a recording head scans preformat information, such as a tracking servo signal”, “recording a tracking

servo signal or the like by using a special servo-track recording device". By contrast, col. 3, lines 58-67 of Ishida (the invention in Ishida) disclose a "magnetic head for recording information signals" and that "a magnetic bit pattern corresponding to a preformat information signal is recorded by contacting the surface of the magnetic recording medium with a master information carrier on which convexity and concavity are formed in advance". Thus, Ishida merely teaches recording preformat information by magnetic transfer using a master information carrier, and that a recording head records information signals excluding preformat information.

In Ishida, preformat signals are not produced by a magnetic head, and typically are larger, smaller, or simply different than those that can be produced by a magnetic head. For example, Col. 10, line 10 teaches preformat signals formed by a master information carrier that are "wider than the recording track width 5 of the magnetic head 1." FIG. 6, as another example, shows angled patterns. This, according to Ishida, allows a reproducing head to more easily read the preformat pattern.

In other words, though Ishida refers to preformat information produced by a magnetic head in contrast to its new method of providing preformat information using a master information carrier, Ishida never teaches or suggests recording preformat information using both magnetic transfer and a recording head. The teaching of Ishida is specifically and intentionally limited to recording preformat information using only a master information carrier. Ishida directly, clearly, and unequivocally teaches away from combining its master

information carrier and a recording head for recording preformat information, in col. 7, lines 36-40:

The conventional method of recording a preformat information signal with a special servo-track writing device and a magnetic head that is built into the drive cannot be employed in the magnetic recording/reproduction device of the present invention (emphasis added).

Additionally, regarding claim 2, the Office Action states that Ishida discloses a fine pattern corresponding to the information signal, and thus teaches the claimed features of fining a pattern of the reproduced preformat information and recording the fined preformat information by the recording head. However, as stated above, Ishida specifically teaches that preformat information is only recorded either: 1) by the recording head (in prior art), in which there is no fining a pattern of reproduced preformat information recorded by magnetic transfer; or 2) by the master information carrier (in new embodiments), in which there is no recording of any type of preformat information, let alone fined preformat information, by a recording head. Thus, Ishida fails to teach or suggest fining a pattern of reproduced preformat information recorded by magnetic transfer and recording the fined preformat information by the recording head, at least because Ishida fails to teach that magnetic transfer and a recording head are ever used in combination to provide preformat information.

Further, secondary reference Tsuyoshi fails to remedy the deficiencies of Ishida. The Office Action states that Tsuyoshi teaches preformat information excluding servo information, citing FIGs. 5a-5f. The “pre-format” areas in the (optical) discs shown in FIGs. 5a-5f of Tsuyoshi include the servo field for each sector. In FIGs. 5a and 5b, Tsuyoshi

teaches a pre-format section for sectors 0 and 1, which are used for the entire block. However, Tsuyoshi specifically teaches that all of these pre-format sections, including those shown in FIGs. 5a and 5b, are formed in advance when the disc is fabricated (e.g., see col. 4, line 63 – col. 5, line 3 and col. 5, lines 17-19). Thus, Tsuyoshi fails to disclose or suggest at least using a recording head to record preformat information.

Ishida accordingly cannot be combined with Tsuyoshi to teach at least servo preformat information recorded by magnetic transfer and preformat information excluding servo information recorded by the recording head. The combination of references would not achieve the invention defined in claims 1, 2, 3, and 9, which improves format efficiency and realizes a high track density by recording servo information in a magnetic recording medium by magnetic transfer and recording preformat information excluding servo information by a recording head. For at least these reasons, Applicants respectfully submit that independent claims 1, 2, 3, and 9, and their dependent claims, are allowable over the references of record, including Ishida and Tsuyoshi.

Claims 11, 14, 16, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishida in view of Tsuyoshi, and further in view of Yamakoshi. Applicants respectfully traverse the rejection for at least the reasons stated above regarding Ishida and Tsuyoshi, and for at least the additional reason that Yamakoshi fails to remedy the deficiencies of Ishida and Tsuyoshi.

For at least these reasons, Applicants respectfully submit that claims 11, 14, 16, and 19 are allowable over the references of record, including Ishida, Tsuyoshi, and Yamakoshi.

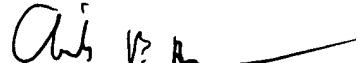
For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

Customer No. 24978

By:



Arik B. Ranson
Registration No. 43,874

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300 South Wacker Drive
Suite 2500
Chicago, Illinois 60606
Telephone: (312) 360-0080
Facsimile: (312) 360-9315

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